

This homework provides an opportunity for me to learn a bit more about you. Completing this homework will count 1% to your final grade and is considered in your participation grade. It should take no more than 15 minutes to complete.

1. Read the course syllabus and make sure you understand the various course policies.
2. Write an email to me (gwmelvin@colby.edu) with a response to the question: *What is mathematics?*. Your response should be 100 words (± 5 words) in length and you are **not allowed to consult any resources**: just sit down and tell me what you think, there's no right or wrong answer. Please put 'What is Mathematics?' as the subject line so your email doesn't get lost in my inbox.
3. Submit responses to the following questions **to my office** before **Monday February 11th, 5pm**. You can leave your responses outside my office, come to office hours to drop off, or set up an appointment.
 - Name: _____
 - Preferred name (what should I call you in class?): _____
 - Major: _____
 - Hometown: _____
 - Name of a book you have read that left a strong impression on you:
 - A memorable fact about you:
 - Why are you taking Math 434?
 - What is your previous maths background?
 - Is there anything you wish me to know about you as a student?¹

¹e.g. "I cannot see orange, so don't use that marker," or "I have a dreadful fear of dihedral groups," "I am a visual learner" "I am on the (insert sport here) team," etc.

Please circle the following terms that you recognise and rate your comfort of working with them:

1 - not very comfortable, 5 - very comfortable

| Concept | 1 | 2 | 3 | 4 | 5 |
|--------------------------|---|---|---|---|---|
| Linear Independence | | | | | |
| Finding bases | | | | | |
| Finding Eigenstuff | | | | | |
| Diagonalisation | | | | | |
| Inner product spaces | | | | | |
| Spectral Theorem | | | | | |
| Group theory definitions | | | | | |
| Group actions | | | | | |
| Dihedral groups | | | | | |
| Symmetric groups | | | | | |